APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/663,045	09/15/2000	Jeffrey Scott Kuskin	73139/0269870	3408

7590 05/19/2004		EXAMINER
Pillsbury , Winthrop LLP 1600 Tyson Boulevard McLean, VA 22102		DUONG, FRANK

ART UNIT	PAPER NUMBER
2666	7

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO 90C (Rev 10/03)

		Application No.	Applicant(s)	
		09/663,045	KUSKIN ET AL.	
Office Action Summary		Examiner	Art Unit	
		Frank Duong	2666	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 November 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is a response to the Preliminary Amendment dated 11/6/2001.

Claims 1-31 are pending in the application.

Information Disclosure Statement

2. The information disclosure statement filed 9/16/2002 complies with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609. It has been considered and placed in the application file.

Claim Objections

3. Claims 1-2 are objected to because of the following informalities:

As per claim 1:

Line 10, "buffer." should read --buffer;--.

Line 11, "the receive state machine" should read --a receive state machine--.

Line 12, "the transmit state machine" should read --a transmit state machine--.

As per claim 2:

Line 2, "the hardware operations" should read --the method--.

Line 4, "the time critical functions; including" should read --, the time critical function including--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 3 and 9-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding **claim 3**, it is unclear whether "a transmit state machine" and "a receive state machine" recited in line 2 are the same as that previously recited in the parent claim 1. Moreover, it is also unclear whether "a cyclic redundancy .... by the system" are the same as that previously recited in claim 1. It seems like the dependent claim 3 fails to further limit base claim 1.

Regarding **claim 9**, it is unclear whether "a timer block ... the system" is the same as that previously recited in base claim 1. Moreover, it seems like the claim fails to further limit base claim 1.

Regarding **claim 10**, it is unclear whether "a transmit state machine" and "a receive state machine" recited in line 1 are the same as that previously recited in the parent claim 1. Moreover, it is also unclear whether "a cyclic redundancy .... by the system" are the same as that previously recited in claim 1. It seems like the dependent claim 3 fails to further limit base claim 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5.   Claims 1-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Hioe et al

(USP 6,341,145) (hereinafter "Hioe").

Regarding **claim 1**, in accordance with Hioe reference entirety, Hioe discloses a

hardware system (Figs. 2-3) for performing media access control functions between a

host central processing unit (101) and a network (207), the system comprising:

a buffer interface (300) that sends frames to the host central processing unit and

receives frames from the central processing unit (*col. 6, lines 45-57 and thereinafter*);

a frame transmitter (203) that includes a transmit buffer (306-310) that receives

frames from the buffer interface and sends frames to the network (col. 6, line 63 to col.

7, line 7);

a frame receiver (205) that includes a receive buffer (336-340) that receives

frames from the network and sends frame to the buffer interface (*col. 7, lines 13-19*);

and

an cryption/decryption block (*304 and 334*) that sends and receives frame

between the transmit buffer and the receive buffer (*col. 6, lines 60-63 and col. 7, lines*

19-21);

a cyclic redundancy code block (*304 and 334*) that receives frames from a

receive state machine (342) and a transmit buffer and sends frames to the transmit

state machine (312) (*col. 6, lines 60-63 and col. 7, lines 19-21*); and

a timer block (*not shown; inherent*) that control timing for frames that are

respectively sent from and received by the system (*col. 9, line 36 and col. 10, lines 40-*

41).

Regarding **claim 2**, in accordance with Hioe reference entirety, Hioe discloses a

method (Figs. 2-3) for processing frames from a network to a host in a media access

control layer with hardware operations, the method comprising:

receiving an incoming frame from the network (*col. 7, lines 10-27 and*

thereinafter); and

processing the incoming frame for time-critical functions the time critical functions

(*col. 7, lines 10-27 and thereinafter*) including:

sending an outgoing frame corresponding to the incoming frame to the host (*col.*

7, lines 10-27);

formulating time-critical response (*col. 7, lines 35-42 and thereinafter*);

accumulating statistics (*col. 7, lines 42-50 and thereinafter*); and

updating a media access control state (*col. 7, lines 50-57 and thereinafter*).

Regarding **claim 3**, in addition to the features recited in base claim 1 (see

rationales discussed above), Hioe further discloses wherein the frame transmitter

includes a transmit state machine (312), the frame receiver includes a receive state

machine (342), and further including:

a cyclic redundancy code block (*304 and 334*) that receives frames from a

receive state machine (342) and a transmit buffer and sends frames to the transmit

state machine (312) (*col. 6, lines 60-63 and col. 7, lines 19-21*); and

a timer block (not shown; inherent)that control timing for frames that are

respectively sent from and received by the system (*col. 10, lines 40-41*).

Regarding **claim 4**, in addition to the features recited in base claim 1 (see

rationales discussed above), Hioe further discloses wherein the frame receiver further

includes a filtering block for filtering frames (*Fig. 10B and col. 12, lines 37-53 and

thereinafter*).

Regarding **claim 5**, in addition to the features recited in base claim 1 (see

rationales discussed above), Hioe further discloses wherein the frame receiver further

includes a retry operations block for determining when retransmission of the particular

frame is needed (*col. 9, lines 41-62; col. 10, lines 23-30 and thereinafter*).

Regarding **claim 6**, in addition to the features recited in base claim 1 (see

rationales discussed above), Hioe further discloses wherein the frame transmitter

include an acknowledgement block for determining that a particular frame was

anticipated and sending an acknowledgement message corresponding thereto (*col. 5,

lines 63-66 and thereinafter*).

Regarding **claim 7**, in addition to the features recited in base claim 1 (see rationales discussed above), Hioe further discloses wherein the frame transmitter further includes a special frames generation block (*see Figs. 9A-B*).

Regarding **claim 8**, in addition to the features recited in base claim 7 (see rationales discussed above), Hioe further discloses wherein the special frames generation block includes means for generating beacons (*not shown; a pilot signal or channel is inherent in TDMA or CDMA wireless system*).

Regarding **claim 9**, in addition to the features recited in base claim 1 (see rationales discussed above), Hioe further discloses a timer block that controls timing for frames that are sent from and received by the system (*col. 9, line 36 and col. 10, lines 40-41*).

Regarding **claim 10**, in addition to the features recited in base claim 9 (see rationales discussed above), Hioe further discloses wherein the frame transmitter includes a transmit state machine (312), the frame receiver includes a receive state machine (342), and further including:

a timer block (not shown; inherent)that control timing for frames that are respectively sent from and received by the system (*col. 10, lines 40-41*).

Regarding **claim 11**, in addition to the features recited in base claim 9 (see rationales discussed above), Hioe further discloses wherein the frame receiver further includes a filtering block for filtering frames (*Fig. 10B and col. 12, lines 37-53 and thereinafter*).

Regarding **claim 12**, in addition to the features recited in base claim 9 (see rationales discussed above), Hioe further discloses wherein the frame receiver further includes a retry operations block for determining when retransmission of the particular frame is needed (*col. 9, lines 41-62; col. 10, lines 23-30 and thereinafter*).

Regarding **claim 13**, in addition to the features recited in base claim 9 (see rationales discussed above), Hioe further discloses wherein the frame transmitter include an acknowledgement block for determining that a particular frame was anticipated and sending an acknowledgement message corresponding thereto (*col. 5, lines 63-66 and thereinafter*).

Regarding **claim 14**, in addition to the features recited in base claim 9 (see rationales discussed above), Hioe further discloses wherein the frame transmitter further includes a special frames generation block (*see Figs. 9A-B*).

Regarding **claim 15**, in addition to the features recited in base claim 14 (see rationales discussed above), Hioe further discloses wherein the special frames generation block includes means for generating beacons (*not shown; a pilot signal or channel is inherent in TDMA or CDMA wireless system*).

Regarding **claim 16**, in accordance with Hioe reference entirety, Hioe discloses a hardware system (Figs. 2-3) for performing media access control functions between a host central processing unit (101) and a network (207), the system comprising:

a buffer interface (300) that sends frames to the host central processing unit and receives frames from the central processing unit (*col. 6, lines 45-57 and thereinafter*);

a frame transmitter (203) that includes a transmit buffer (306-310) that receives

frames from the buffer interface and sends frames to the network (col. 6, line 63 to col.

7, line 7);

a frame receiver (205) that includes a receive buffer (336-340) that receives

frames from the network and sends frame to the buffer interface (*col. 7, lines 13-19*);

and

a timer block (not shown; inherent)that control timing for frames that are

respectively sent from and received by the system (*col. 10, lines 40-41*).

Regarding **claim 17**, in addition to the features recited in base claim 16 (see

rationales discussed above), Hioe further discloses wherein the frame transmitter

includes a transmit state machine (312), the frame receiver includes a receive state

machine (342), and further including:

a cyclic redundancy code block (*304 and 334*) that receives frames from a

receive state machine (342) and a transmit buffer and sends frames to the transmit

state machine (312) (*col. 6, lines 60-63 and col. 7, lines 19-21*).

Regarding **claim 18**, in addition to the features recited in base claim 16 (see

rationales discussed above), Hioe further discloses wherein the frame receiver further

includes a filtering block for filtering frames (*Fig. 10B and col. 12, lines 37-53 and

thereinafter*).

Regarding **claim 19**, in addition to the features recited in base claim 16 (see

rationales discussed above), Hioe further discloses wherein the frame receiver further

includes a retry operations block for determining when retransmission of the particular

frame is needed (*col. 9, lines 41-62; col. 10, lines 23-30 and thereinafter*).

Regarding **claim 20**, in addition to the features recited in base claim 16 (see

rationales discussed above), Hioe further discloses wherein the frame transmitter

include an acknowledgement block for determining that a particular frame was

anticipated and sending an acknowledgement message corresponding thereto (*col. 5,*

lines 63-66 and thereinafter).

Regarding **claim 21**, in addition to the features recited in base claim 16 (see

rationales discussed above), Hioe further discloses wherein the frame transmitter

further includes a special frames generation block (*see Figs. 9A-B*).

Regarding **claim 22**, in addition to the features recited in base claim 21 (see

rationales discussed above), Hioe further discloses wherein the special frames

generation block includes means for generating beacons (*not shown; a pilot signal or*

channel is inherent in TDMA or CDMA wireless system).

Regarding **claim 23**, in addition to the features recited in base claim 16 (see

rationales discussed above), Hioe further discloses an cryption/decryption block (*304*

and 334) that sends and receives frame between the transmit buffer and the receive

buffer (*col. 6, lines 60-63 and col. 7, lines 19-21*).

Regarding **claim 24**, in addition to the features recited in base claim 2 (see

rationales discussed above), Hioe further discloses wherein the time critical function of

formulating time-critical responses includes formulating an outgoing response frame for

transmission to the network (*col. 7, lines 35-42 and thereinafter*).

Regarding **claim 25**, in addition to the features recited in base claim 24 (see rationales discussed above), Hioe further discloses wherein the time critical function of formulating an outgoing response frame include transmitting the outgoing response frame to the network (*col. 7, lines 35-42 and thereinafter*).

Regarding **claim 26**, in addition to the features recited in base claim 25 (see rationales discussed above), Hioe further discloses wherein the method of formulating an outgoing response frame includes generating a special frame (*see Figs. 9A-B*).

Regarding **claim 27**, in addition to the features recited in base claim 26 (see rationales discussed above), Hioe further discloses wherein the special frame includes a beacon (*not shown; a pilot signal or channel is inherent in TDMA or CDMA wireless system*).

Regarding **claim 28**, in addition to the features recited in base claim 2 (see rationales discussed above), Hioe further discloses wherein the method of formulating an outgoing response frame includes receiving an incoming frame from the host central processing unit (101) corresponding to the outgoing response frame (*col. 5, line 10 and thereinafter*).

Regarding **claim 29**, in addition to the features recited in base claim 2 (see rationales discussed above), Hioe further discloses wherein the time critical functions implemented by hardware operations include decrypting the incoming frame.

Regarding **claim 30**, in addition to the features recited in base claim 2 (see rationales discussed above), Hioe further discloses wherein the time critical functions

implemented by hardware operations include determining whether retransmission of a

particular frame is needed (*col. 9, lines 41-62; col. 10, lines 23-30 and thereinafter*).

Regarding **claim 31**, in addition to the features recited in base claim 2 (see rationales

discussed above), Hioe further discloses wherein the time critical functions implemented

by hardware operations include determining whether a particular frame was anticipated

and sending an acknowledgement message corresponding thereto (*col. 5, lines 63-66

and thereinafter*).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Snell (USP 5,982,807).

Lee et al (USP 5,636,140).

Belanger et al (USP 5,717,688).

IEEE Std 802.11a, Wireless LAN Medium Access Control (MAC) and Physical

Layer (PHY) specification: High-Speed Physical Layer in the 5 GHZ Band, pages 1-82,

1999.

Hahn et al, PRISM Wireless LAN Chipset-Testbed Design, Worcester

Polytechnic Institute, pages 1-84, 1997.

Kamerman et al, WaveLan-II-A High Performance Wireless LAN for Unlicensed

Band, Bell Labs Technical Journal, pages 118-133, 1997.

7. Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Frank Duong whose telephone number is (703) 308-

5428. The examiner can normally be reached on 7:00AM-3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Seema Rao can be reached on (703) 308-5463. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Frank Duong
Examiner
Art Unit 2666

May 11, 2004